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#Exposure commands
#tlength --> Length of exposure in hours
#daysperwk --> days per week to expose (set to 5 if 5 exposures and 7 if
everyday)
#numexp --> number of days to expose animals

ftime <- times
# Create a signal data frame to hold the vectors for all forcing
functions.
# All vectors are initialised to zero
signal <- as.data.frame(list(ftime = ftime,
                             day = ftime/24,

#day of study
                             tofday=round(ftime%%24, digits = 3),
#time of day (24 hour clock)
                             dofwk = round(((ftime/24)%7), digits=3),
#day of week 1 to 7
                             import1 = rep(0, length(ftime))
#Pulse for length of daily exposure
))

#Inhalation exposure control (creates a square pulse for each time step
of model)
signal$import1[signal$tofday >= dstart & signal$tofday <
(dstart+dlength)] <- 1.0
signal$import1[signal$dofwk >= ddaysperwk] <- 0.0
signal$import1[signal$ftime > dexpnd*24] <- 0.0

#####
#####

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sigimp <- approxfun(signal$ftime, signal$import1, rule = 2)
Sigimp <- approx(signal$ftime, signal$import1, xout=ftime ,rule = 2)$y
forcings1 <- cbind(ftime, Sigimp)

forcings <- list(
  data.frame(forcings1)
)

forcout <- data.frame(forcings)

```